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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 10/532,626 | 04/25/2005 | Friedrich Boecking | R.304052 | 6792 |
| 2119 | 7590 | 04/07/2006 | EXAMINER | |
| RONALD E. GREIGG GREIGG & GREIGG P.L.L.C. 1423 POWHATAN STREET, UNIT ONE ALEXANDRIA, VA 22314 | | | MCGRAW, TREVOR EDWIN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3752 | |

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/532,626 | BOECKING, FRIEDRICH | |
| | Examiner | Art Unit | |
| | Trevor McGraw | 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 25 April 2005.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 8-27 is/are pending in the application.

4a) Of the above claim(s) 20-24 and 27 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 8-19, 25 and 26 is/are rejected.

7) ☒ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a) ☒ All b) ☐ Some * c) ☐ None of:

 1. ☒ Certified copies of the priority documents have been received.

 2. ☐ Certified copies of the priority documents have been received in Application No. _____.

 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 04/25/2005.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of species consisting of Figures 1-3 in the reply filed on 03/08/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Non-elected claims are 20-24 and 27 have been withdrawn. It is noted to applicant that claim 27 is dependent from non-elected claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8-19 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Stoecklein et al. (US Patent Application Publication 2002/0134853).

In regard to claims 8-19 and 25-26, Stoecklein et al. teaches a fuel injection device for an internal combustion engine where the device comprises a control chamber (58), a control valve (76) that is movable in three positions-two end positions and at least one intermediary position that is located between a high pressure side (52) and a low pressure side (66") and operates to open or block communication of the control

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chamber (58) with the low pressure side (66"). Stoecklein et al. also teaches an outlet throttle (66") that is located between the control valve (76) and the low pressure side (66") with a piezoelectric actuator (68) means to move the control valve (68) between all three positions where the control valve blocks communication between the low pressure side and the control chamber in its first position, communication between the control chamber and the low pressure side via the first outlet conduit (66) when the control valve is in its second position and communication between the control chamber and the low pressure side via a second outlet conduit (74) when the control valve is in its third position. The fuel injection device of Stoecklein et al. further teaches a fuel injection device having an outlet throttle (86) of the second outlet conduit (74) that has a higher throttle resistance than the outlet throttle (66") on the low pressure side. The control chamber also communicates with the low pressure side via the second outlet conduit (74) as well. The control valve of Stoecklein et al., is embodied as a double seat valve having a valve body (76) that is axially adjustable within a valve chamber (78) between two valve seats (80 and 82) where valve seat (82) communicates with the first outlet conduit (66) and the second valve seat (80) communicates with the low pressure side, and the valve chamber (78) communicates with the second outlet conduit (74).

The control chamber (58) of Stoecklein et al. is connected to the high pressure side (52) via an inlet throttle (60) that has a lesser throttle resistance than the outlet throttle (86) of the second outlet conduit (74).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8-19 and 25-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Stoeklein et al. (US Patent Publication 2002/0134853). The Patent Publication of Stoecklein et al. teaches a fuel injection device for an internal combustion engine as previously discussed in the 102 (b) rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Boecking (US Patent Publication 2003/0052187), Boeking (US Patent Publication 2002/0074423), Stoecklin et al. (US Patent 6,814,302).

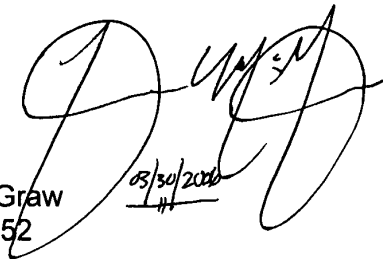
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trevor McGraw whose telephone number is (571) 272-7375. The examiner can normally be reached on Monday-Friday (2nd & 4th Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trevor McGraw
Art Unit 3752



03/30/2010
LH

TEM

Eric Keasel
Eric Keasel
Primary Examiner
TC 3700